

1 What is claimed is:

2
3 1. A method for generating localizable message catalogs for Java-based
4 applications, comprising:

5
6 identifying one or more localizable strings of a Java source code;

7
8 marking the one or more localizable strings to produce one or more
9 marked localizable strings by inserting a marker into each localizable string of
10 the one or more localizable strings;

11
12 extracting the one or more marked localizable strings;

13
14 storing the one or more marked localizable strings into an external text
15 file; and
16

17 generating one or more ListResourceBundle data structures from the
18 one or more marked localizable strings stored in the external text file.

19
20 2. The method of claim 1, wherein extracting and storing the one or more
21 marked localizable strings into one or more text files and generating the one or
22 more ListResourceBundle data structures occurs when the Java source code
23 is compiled.

1
2 3. The method of claim 1, wherein the external text file is a message
3 catalog file.

4
5 4. The method of claim 1, wherein the one or more marked localizable
6 strings in the external text file are function calls to an internationalization tool.

7
8 5. The method of claim 1, wherein generating one or more
9 ListResourceBundle data structures from the one or more marked localizable
10 strings comprises for each marked localizable string of the one or more
11 marked localizable strings:

12
13 determining a current locale language in which the Java source code is
14 running;

15
16 determining whether the current locale language is a default language;

17
18 if the current locale language is the default language, returning a
19 marked localizable string of the one or more marked localizable strings;

20
21 if the current local language is not the default language, determining
22 whether a language-specific version of the marked localizable string that
23 corresponds to the current locale language exists in a ListResourceBundle

1 data structure of the one or more ListResourceBundle data structures that
2 corresponds to the marked localizable string; and
3

4 if the language-specific version exists, opening the ListResourceBundle
5 that corresponds to the marked localizable string and returning the language-
6 specific version of the marked localizable string from the ListResourceBundle.
7

8 6. The method of claim 5, wherein the default language is English.
9

10 7. The method of claim 1, further comprising translating the one or more
11 marked localizable strings of the Java source code, wherein translating the
12 one or more localizable strings comprises:
13

14 obtaining the external text file containing the one or more marked
15 localizable strings;
16

17 translating the one or more marked localizable strings stored in the
18 external text file; and
19

20 generating a ListResourceBundle data structure for the translated one or
21 more marked localizable strings.
22

1 8. A method for generating localizable message catalogs for Java-based
2 applications, comprising:

3
4 identifying one or more localizable strings of a Java source code;

5
6 marking the one or more localizable strings to produce one or more
7 marked localizable strings by inserting a marker into each localizable string of
8 the one or more localizable strings;

9
10 extracting the one or more marked localizable strings;

11
12 storing the one or more marked localizable strings into an external text
13 file in a first directory;

14
15 generating a new version of the Java source code in a second directory
16 from which an internationalization tool is run;

17
18 retrieving the marked localizable strings from a ListResourceBundle
19 class;

20
21 generating a merged external text file containing the one or more
22 marked localizable strings in the first directory and the second directory;

1 generating one or more ListResourceBundle files corresponding to the
2 merged external text file with each ListResourceBundle file of the one or more
3 ListResourceBundle files corresponding to a desired language; and
4

5 compiling the one or more ListResourceBundle files and the Java
6 source code.
7

8 9. The method of claim 8, wherein the external text file is a message
9 catalog file.
10

11 10. The method of claim 8, wherein the marked localizable strings in the one
12 or more intermediate message catalog files are function calls to the
13 internationalization tool.
14

15 11. The method of claim 8, wherein retrieving the marked localizable strings
16 from a ListResourceBundle class comprises:
17

18 determining a current locale language in which the Java source code is
19 running;
20

21 determining whether the current locale language is a default language;
22

1 if the current locale language is the default language, returning a
2 marked localizable string of the one or more marked localizable strings;

3
4 if the current local language is not the default language, determining
5 whether a language-specific version of the marked localizable string that
6 corresponds to the current locale language exists in a ListResourceBundle
7 data structure of the one or more ListResourceBundle data structures that
8 corresponds to the marked localizable string; and

9
10 if the language-specific version exists, opening up the
11 ListResourceBundle that corresponds to the marked localizable string and
12 returning the language-specific version of the marked localizable string from
13 the ListResourceBundle.

14
15 12. The method of claim 11, wherein the default language is English.

16
17 13. The method of claim 8, wherein the merged external text file is an
18 intermediate message catalog file.

19
20 14. The method of claim 8, wherein after generating a merged external text
21 file, further comprising:
22

1 translating the one or more marked localizable strings in the merged
2 external text file into one or more desired languages.

3
4 15. A method for generating localizable message catalogs for Java-based
5 applications, comprising:

6
7 opening an original Java source code file that is stored in a first
8 directory;

9
10 opening a first message catalog file;

11
12 copying the first message catalog file to a second message catalog file;

13
14 creating a modified Java source code file from the original Java source
15 code file in a second directory;

16
17 reading the contents of the original Java source code file into a buffer;

18
19 if the buffer contains one or more marked localizable strings, for each
20 marked localizable string of the one or more marked localizable strings
21 comprising:

1 determining if the marked localizable string is stored in the first
2 message catalog file;

3
4 if the marked localizable string is stored in the first message
5 catalog file, comprising:

6
7 obtaining a message number corresponding to the marked
8 localizable string; and

9
10 replacing the marked localizable string in the buffer with a
11 method call that can obtain the marked localizable string;

12
13 if the marked localizable string is not stored in the first message
14 catalog file, comprising:

15
16 appending the marked localizable string to the second
17 message catalog file; and

18
19 removing a marker from the marked localizable string in the
20 buffer to convert the marked localizable string to a default localized string;

21
22 writing to the modified Java source code file from the buffer; and
23

1 closing the original Java source code file, the first message catalog file,
2 the second message catalog file, and the modified Java source code file.

3
4 16. A method for generating localizable message catalogs for Java-based
5 applications, comprising:

6
7 generating a plurality of modified Java source code files;

8
9 generating a message catalog file having one or more localizable strings
10 for a Java package;

11
12 translating the message catalog file manually;

13
14 generating a plurality of ListResourceBundle data structure files for the
15 one or more localizable strings of the translated message catalog file; and

16
17 compiling the plurality of modified Java source code files and the
18 plurality of ListResourceBundle data structure files.